Oct. 25, 1932. J. PERLOFF 1,884,191

ADJUSTABLE TOP FOR TABLES

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Fig. 1.

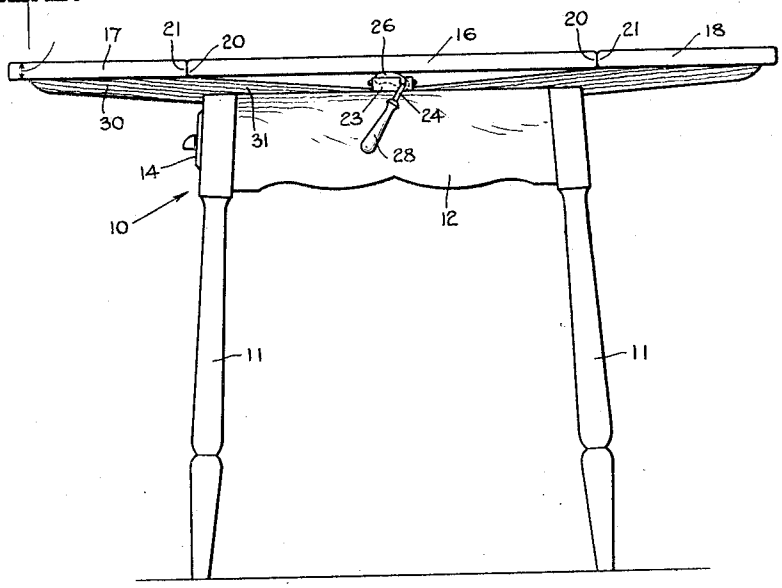
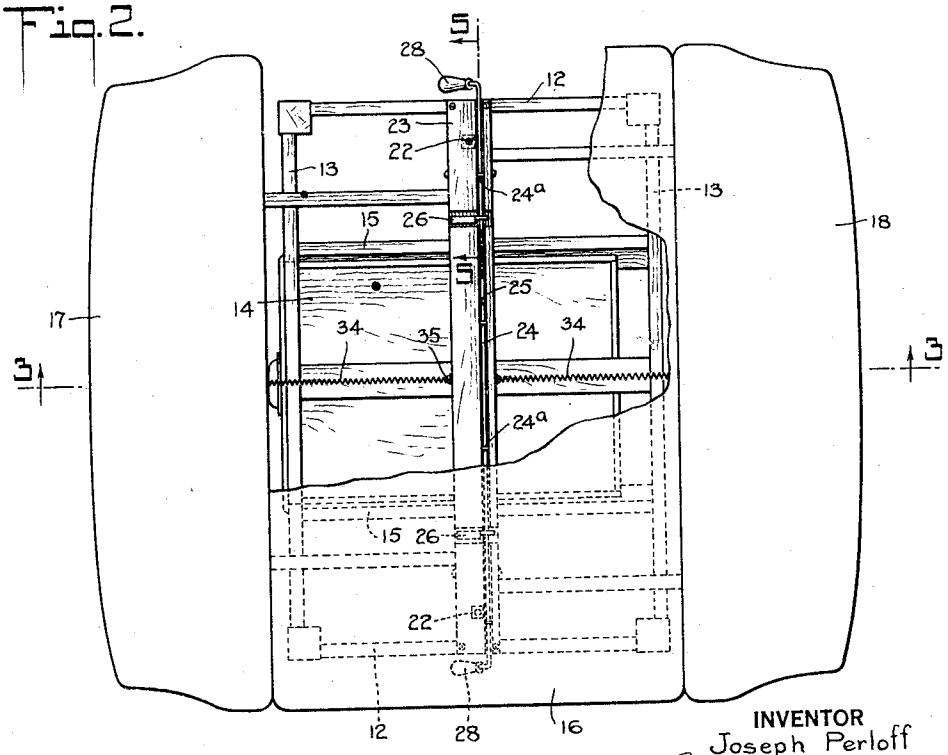


Fig. 2.



INVENTOR
Joseph Perloff

BY
Rucker & Ryan

HIS ATTORNEYS

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Fig. 3.

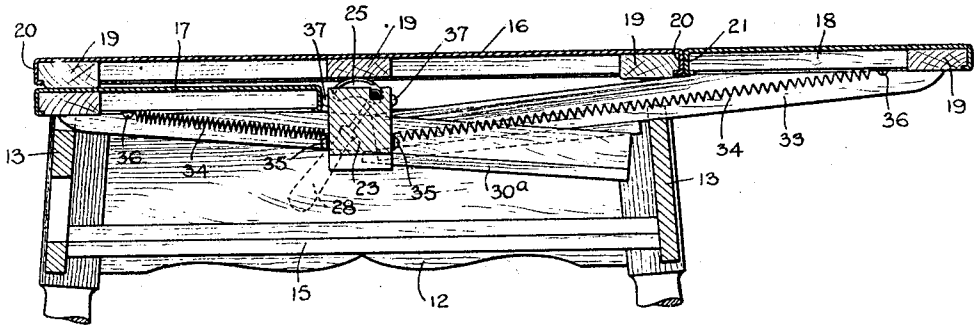


Fig. 4.

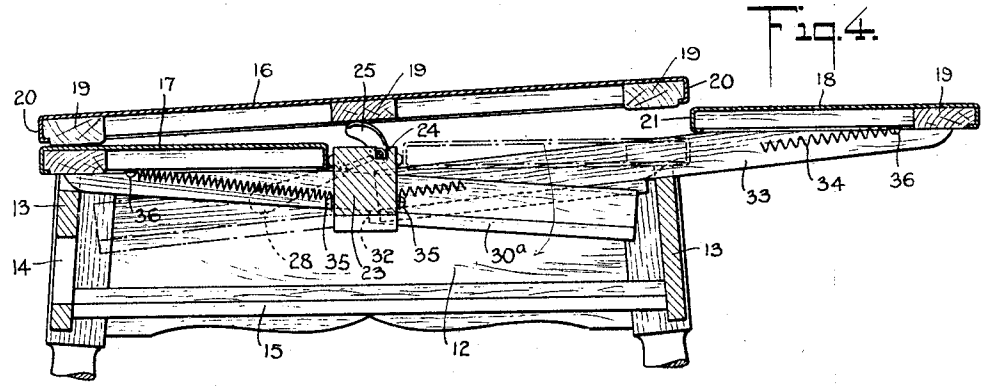
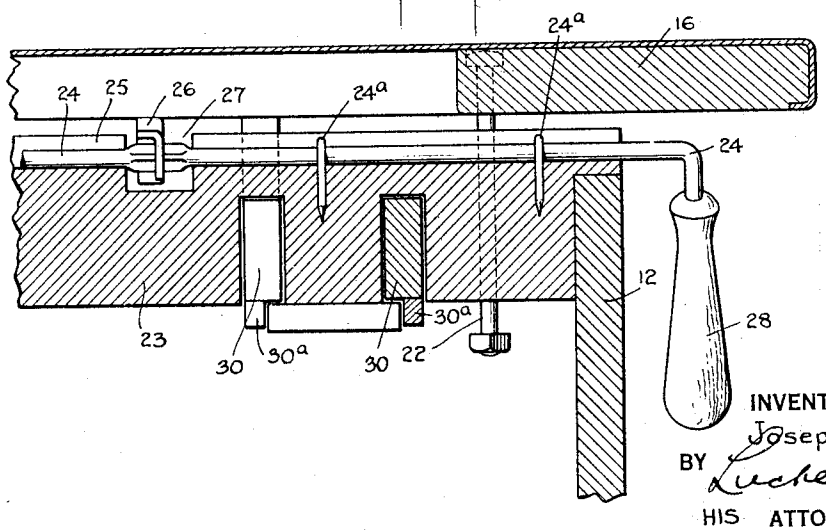


Fig. 5.



INVENTOR
Joseph Perloff
BY Lueke & Ryan
HIS ATTORNEYS

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UNITED STATES PATENT OFFICE

JOSEPH PERLOFF, OF BROOKLYN, NEW YORK

ADJUSTABLE TOP FOR TABLES

Application filed April 30, 1930. Serial No. 448,683.

This invention relates to adjustable tops for tables and the like.

More particularly, the invention is directed to an improved form of top provided with a main top portion and one or more supplemental side top portions, and mechanism whereby such one or more side top portions when desired are automatically moved to concealed position.

My invention may be embodied in the form of a table having a single disappearing supplemental top portion, disposed at one side relative to a main or non-disappearing top portion, or may be embodied with two disappearing top portions disposed respectively on opposite sides of the main top portion.

The one or more supplemental top portions are respectively mounted on a set of tapered or cam slide arms and are provided with retractile springs, whereby upon manually moving the one or more disappearing top portions to open position, such disappearing top portions are disposed in flush relation with the main top portion, and upon the automatic movement of the one or more disappearing top portions, the main or non-disappearing top portion returned to position substantially coincident with its position when such one or more disappearing top portions are in open position.

More particularly, the automatic mechanism embodies a handle disposed at one side of the frame table, or two handles respectively disposed at opposite sides of the table frame, such handle or handles being secured to a shaft, cams carried by such shaft for effecting the tilting of the main top portion to enable the tensed retractile means of the respective disappearing top portions to be automatically returned to concealed position under the main top portion.

Further features and objects of this invention will be more fully understood from the following detail description and accompanying drawings, in which

Fig. 1 is an end view of a table having a center top portion and two disappearing side top portions, embodying my invention;

Fig. 2 is a top plan view of Fig. 1, certain parts being broken away to expose otherwise hidden parts;

Fig. 3 is a sectional elevation on line 3—3 of Fig. 2, on a somewhat enlarged scale, and showing the tilting mechanism oscillated to a partial position to enable the left-hand top portion to be moved to its concealed position;

Fig. 4 is a sectional elevation similar to Fig. 3, but indicating the tilting mechanism and its handle moved to a further oscillated position preparatory for the disappearance of the right-hand top portion; and

Fig. 5 is a sectional elevation on line 5—5 of Fig. 2 on an enlarged scale.

Referring to the drawings, the frame 10 is shown provided with four legs 11, the opposite end members 12 and the opposite side members 13. The frame may be provided with a drawer, as indicated at 14, the supporting sides for the drawer being shown at 15.

In such embodiment of my invention, the main or non-disappearing top portion 16 serves as the center top portion and the disappearing top portions 17, 18 are related to be positioned on opposite sides of the center top portion 16 and substantially flush therewith when moved to exposed position.

The top portions are indicated as formed of enamelled sheet metal and provided with under frame members 19, indicated as of wood but which may be of any other suitable material; similar construction is illustrated of the respective side top members 17, 18. The opposite side 20, 20, of the center top portion 16 are preferably rounded, and similarly the inner and abutting edges 21, 21, of the respective side top portions 17, 18 are rounded, to facilitate relative sliding movement at such edges in the movement of disappearance of the side top portions and the converse movement to open position.

The center or main top portion 16 is mounted relative to the frame 10 to be vertically displaceable and tiltable by the provision of pins 22 depending from the under side of the frame, i. e., central strip 19, of the top portion 16, such pins 22 are freely slidingly received within suitable recesses disposed in the central block 23, which as shown may ex-

tend substantially centrally from one end member 12 to the opposite end member 12.

The elevation of the main table portion 16 may be effected by any suitable means and to afford tilting of the same at its one side or the other. As one form of tilting mechanism, I have illustrated the same comprising the shaft 24 suitably rotatably mounted on the block 23, as by forming a groove 25 on the upper face of the block 23 and a set of U-staples 24^a or equivalent. To such shaft 24 are secured suitable cam means for effecting the elevation of the top portion 16, preferably for attaining uniform extents of elevation, as by a pair or other symmetrically related set of cam members 26, see Figs. 2, 3, 4 and 5, the upper face of the block 23 being cut away respectively at 27 adjacent the cams 26 to afford free movement of the cams. At one or both ends of the shaft 24, I provide a handle 28, which is thus disposed exteriorly of the table frame 12 to be readily accessible for operation of the tilting mechanism.

The one or more supplemental top portions are suitably mounted for movement to and from concealed position to exposed and usable position, and in the latter position in substantially flush relationship with the center or main top portion, and suitable means is provided for the automatic return of the supplemental top portion or portions from exposed to concealed position. As one manner of carrying out this phase of my invention, I have illustrated in the drawings the mounting of two supplemental top portions 17, 18, each on a pair of supporting arms 30, each including a cam or tapered portion 31 extending from the inner end of its arm 30 to an intermediate portion of its arm 30, and a strip 30^a forming a shoulder 32 for limiting the movement of its arm outwardly of the table frame. Such arms extend through the indicated slots in the side frame members 13 and slide on the upper faces of the slots.

Preferably, also, the effective vertical height of each tapered portion 31 when the movable top portion is in its exposed position, at which stage the under face of the main or center top portion 16 rests upon the tapered portion 31 of the arms 30, see Fig. 1, is substantially equal to the thickness indicated by the dotted dimension line 34, see Fig. 1, of the movable top portion resting in the slot when in concealed position, as is illustrated in Fig. 3 for the left-hand movable top portion 17, and similarly for the right-hand movable top portion 18, such provision of means locates the center or main top portion 16 in substantially the same horizontal plane when either or both of the supplemental top portions are in concealed position as when either or both of the latter are in open position.

As one form of resilient means, I have employed a coiled retractile spring 34, one end of which is secured to a screw 35 or equivalent, at any suitable fixed location, as at the block 23, and its free end secured to a screw 36 or equivalent on the under face of the respective top portions 17, 18.

The mode of operation of the illustrated embodiment of my invention and of my invention in general will be largely apparent from the drawings supplemented by the above set forth particulars. In Figs. 1 and 2, the supplemental top portions are shown in their respective open positions and the parts of the elevating and tilting mechanism in substantially neutral position. By grasping either handle 28, say, with the index or middle finger while resting the thumb on the top portion 16 at one side of the shaft 24, say to the right of the shaft 24, as viewed in Figs. 2 and 3, and turning the handle 28 in clockwise direction, the table portion 16 will be slightly tilted in clockwise direction by engagement of the cams 25 with the under face of the top portion 16 to provide a clearance between the under face of the left-hand side of the top portion 16 to effect the movement of the left-hand table portion 17 under tension of its retractile spring 34 automatically through such clearance under the left-hand side edge of the table portion 16 to its concealed position, as appears in Fig. 3. A set of bumpers, such as rubber buttons 37, may be employed to cushion the engagement of any supplemental table portion with the block 23.

In a like manner, by turning the handle 28 to further extent in clockwise direction and passing the thumb or other finger to engage the table portion 16 to the left of the shaft 24, the cams 25 tilt the table portion 26 in counter-clockwise direction, compare Fig. 4 with Fig. 3, thereby providing the clearance at the right-hand side edge of the table portion 16 for the automatic withdrawal therethrough of the right-hand table portion 18 to its concealed position.

When it is desired to extend the top of the table by either or both of the movable top portions, either or both are grasped manually and pulled outwardly relative to the table frame, against the tension of the retractile springs 34, to sufficient extent to permit the center or main top portion 16 to return to its original position, and upon releasing manual hold of the top portion, its retractile spring 34 effect the position of the top portion in flush relationship with the center or main top portion 16. Such action is carried out without grasping either handle 28.

It will be observed that the use of wood or like relatively soft material for the under face of the enamelled top plate affords protection against abrasion of the enamelled plate in the movements of the supplemental

top portions to exposed and concealed positions.

My invention, as indicated above, is readily applicable to tables and similarly to cabinets and other suitable forms of furniture and other articles. A distinct advantage is obtained by my invention in locating the one or more supplemental top portions under the main or non-disappearing top portion, in that the supplemental top portion or portions when thus concealed are removed from obstruction in the use of the article, as compared with folded forms of supplemental top portions, and afford free access to the drawer or other parts of the frame disposed below the main or non-disappearing top portion.

Whereas I have described my invention by reference to specific forms thereof, it will be understood that many changes and modifications may be made without departing from the spirit of the invention.

I claim.

1. The combination of a main top portion for a table or the like, mounting means for movably supporting said main top portion and to permit tilting of said main top portion when in elevated position, movable means cooperating with said mounting means for vertically elevating said main top portion, a supplemental top portion, means secured to said supplemental top portion for supporting the same when in exposed position by engagement with said main top portion, and retractile means for moving said supplemental top portion from its exposed position to concealed position effective upon the elevation and tilting of said main top portion.

2. The combination of a main top portion for a table or the like, mounting means for movably supporting said main top portion and to permit tilting of said main top portion when in elevated position, movable means cooperating with said mounting means for vertically elevating said main top portion, a supplemental top portion, means secured to said supplemental top portion for supporting the same when in exposed position by engagement with said main top portion, said securing means having a tapered portion to effect substantially flush relation between said main top portion and said main supplemental portion, and retractile means for moving said supplemental top portion from its exposed position to concealed position effective upon the elevation and tilting of said main top portion.

3. A table comprising in combination a main top portion, a frame, means for mounting said main top portion on said frame to permit vertical elevation and lateral tilting, movable means provided with a handle for elevating said main top portion relative to said frame, a supplemental top portion slidingly supported on said frame and resilient means for moving said supplemental top portion from one position to another relative to said main top portion.

4. A table comprising in combination a main top portion, a frame, means for mounting said main top portion on said frame to permit vertical elevation and lateral tilting, movable means provided with a handle for elevating said main top portion relative to said frame, a supplemental top portion, tapered arm means for slidingly supporting said supplemental top portion on said frame and resilient means for moving said supplemental top portion from one position to another relative to said main top portion.

5. A table comprising in combination a main top portion, a frame, cam means for mounting said main top portion on said frame to permit vertical elevation and lateral tilting, movable means provided with a handle for elevating said main top portion relative to said frame, a supplemental top portion slidingly supported on said frame and resilient means for moving said supplemental top portion from one position to another relative to said main top portion.

6. A table comprising in combination a main top portion, a frame, cam means provided with a handle for mounting said main top portion on said frame to permit vertical elevation and lateral tilting, means for elevating said main top portion relative to said frame, a supplemental top portion slidingly supported on said frame and resilient means for moving said supplemental top portion from one position to another relative to said main top portion.

7. In an article of furniture, the combination of a frame provided with legs, a main top portion, means for vertically elevating said main top portion, said vertically elevating means comprising a shaft, cam means carried by said shaft, means for rotatably mounting said shaft on said frame, a handle for said shaft, a supplemental top portion, means for slidingly supporting said supplemental top portion on said frame to afford movement of said supplemental top portion from a position laterally of said main top portion to a position under said main top portion, and retractile means for moving said supplemental top portion from its said lateral position to its said under position.

In testimony whereof I have signed this specification this 9th day of April, 1930.

JOSEPH PERLOFF.